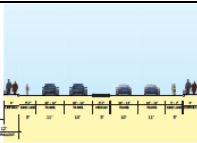
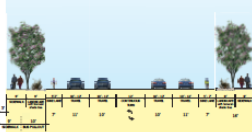
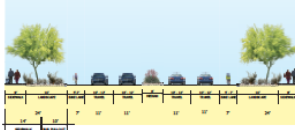
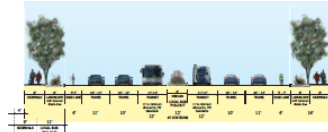
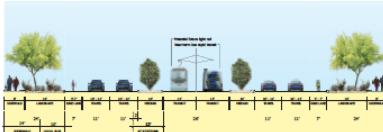

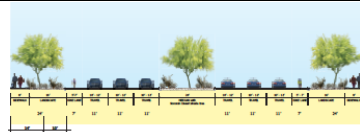
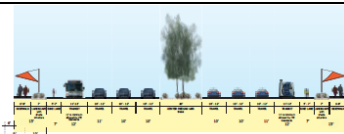
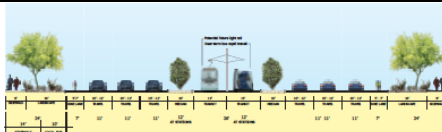





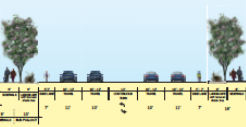

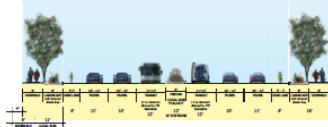
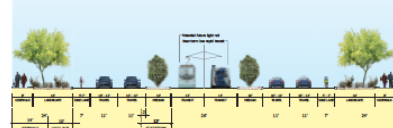

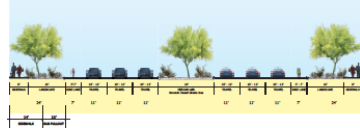
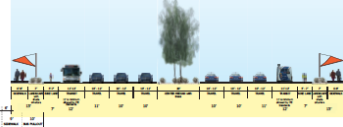
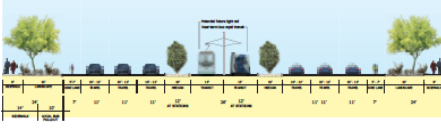
# BROADWAY: EUCLID TO COUNTRY CLUB

## INITIAL DRAFT PERFORMANCE MEASURE ASSESSMENT OF STREET CROSS SECTION CONCEPTS

| STREET CROSS SECTION CONCEPT  | PEDESTRIAN ACCESS AND MOBILITY                          |                                       |  |   |                          |   |                      |                           |                                   | BICYCLE ACCESS AND MOBILITY                  |   |                        |                                |                              |                          |                    | TRANSIT ACCESS AND MOBILITY   |                             |                          |                        |                                    |   |                        |
|---|---|---------------------------------------|--|---|--------------------------|---|----------------------|---------------------------|-----------------------------------|--|---|------------------------|--------------------------------|------------------------------|--------------------------|--------------------|-------------------------------|-----------------------------|--------------------------|------------------------|------------------------------------|---|------------------------|
|   | 1a. Functionality of Streetside for Pedestrian Activity | 1b. Separation from Vehicular Traffic | 1c. Pedestrian-Oriented Facilities or Improvements | 1d. Walkable Network / Neighborhood Connections | 1e. Pedestrian Crossings | 1f. Vehicle / Pedestrian Conflicts at Driveways | 1g. Universal Design | 1h. Walkable Destinations | 1i. Ease of Transition to Walking | 2a. Separation of Bikes and Arterial Traffic | 2b. Bike Conflicts with Crossing Vehicles | 2d. Pavement Condition | 2e. Bike Facility Improvements | 2f. Bike Network Connections | 2g. Corridor Travel Time | 2h. Bike Crossings | 3a. Distance to Transit Stops | 3b. Transit Stop Facilities | 3c. Corridor Travel Time | 3d. Schedule Adherence | 3e. Frequency and Hours of Service | 3f. Accommodation of Future High Capacity Transit | 3g. Riders per Vehicle |
| Existing Conditions   | --<br>to<br>---   | -<br>to<br>---                        | ---  |   | --                       | o<br>to<br>---                                  |                      |                           |                                   | -  | -<br>to<br>---                            |                        | o<br>to<br>---                 |                              |                          | o<br>to<br>---     |                               | -<br>to<br>---              | o<br>now<br>--<br>future | o<br>to<br>---         |                                    | -   |                        |
| Option 4A (67' r.o.w.)<br>       | ---   | ---                                   | ---  |   | ++                       | -   |                      |                           |                                   | -  | o   |                        | +                              |                              |                          | ++                 |                               | +                           | -                        | o                      |                                    | -   |                        |
| Option 4B (100' r.o.w.)<br>      | ++  | ++                                    | o  |   | ++                       | +   |                      |                           |                                   | +  | o   |                        | +                              |                              |                          | ++                 |                               | +                           | -                        | o                      |                                    | -   |                        |
| Option 4C (112' r.o.w.)<br>     | +++   | +++                                   | ++   |   | ++                       | ++  |                      |                           |                                   | +  | o   |                        | o                              |                              |                          | ++                 |                               | ++                          | -                        | o                      |                                    | -   |                        |
| Option 4+T A (118' r.o.w.)<br> | +   | +                                     | o  |   | +                        | +   |                      |                           |                                   | o  | +   |                        | o                              |                              |                          | +                  |                               | ++                          | ++                       | +++                    |                                    | ++  |                        |
| Option 4+T B (152' r.o.w.)<br> | +++   | +++                                   | ++   |   | o                        | ++  |                      |                           |                                   | +  | +   |                        | o                              |                              |                          | +                  |                               | ++                          | ++                       | +++                    |                                    | ++  |                        |
| Option 6A (114' r.o.w.)<br>    | o   | o                                     | o  |   | +                        | +   |                      |                           |                                   | o  | o   |                        | o                              |                              |                          | +                  |                               | o                           | o                        | o                      |                                    | ++  |                        |
| Option 6B (152' r.o.w.)<br>    | ++  | ++                                    | ++   |   | +                        | ++  |                      |                           |                                   | +  | o   |                        | o                              |                              |                          | +                  |                               | +                           | o                        | o                      |                                    | ++  |                        |
| Option 6+T A (146' r.o.w.)<br> | -   | -                                     | -  |   | --                       | o   |                      |                           |                                   | +  | o   |                        | o                              |                              |                          | o                  |                               | ++                          | +                        | ++                     |                                    | ++  |                        |
| Option 6+T B (174' r.o.w.)<br> | ++  | ++                                    | ++   |   | -                        | ++  |                      |                           |                                   | +  | +   |                        | o                              |                              |                          | -                  |                               | ++                          | +++                      | +++                    |                                    | +++   |                        |



**BROADWAY: EUCLID TO COUNTRY CLUB**  
**INITIAL DRAFT PERFORMANCE MEASURE ASSESSMENT OF STREET CROSS SECTION CONCEPTS**

| STREET CROSS SECTION CONCEPT  | VEHICULAR ACCESS AND MOBILITY   |  |  |                        |                     |                   |   | SENSE OF PLACE         |                          |                               |                          |                                |                          | ENVIRONMENTAL / PUBLIC HEALTH |                      |                              |                 |                      |                               | ECONOMIC VITALITY |                   |                                    |                                   |                                   |                                      | PROJECT COST        |                |                       |                      |  |  |
|---|---------------------------------|--|--|------------------------|---------------------|-------------------|---|------------------------|--------------------------|-------------------------------|--------------------------|--------------------------------|--------------------------|-------------------------------|----------------------|------------------------------|-----------------|----------------------|-------------------------------|-------------------|-------------------|------------------------------------|-----------------------------------|-----------------------------------|--------------------------------------|---------------------|----------------|-----------------------|----------------------|--|--|
|   | 4a. Movement of Through Traffic | 4b. Intersection Delay -- Overall Intersection Performance | 4c. Intersection Delay -- Worst Movement | 4d. Accident Potential | 4e. Lane Continuity | 4f. Persons Trips | 4g. Access Management for Adjacent Properties | 5a. Historic Resources | 5b. Visual Quality       | 5c. Broadway as a Destination | 5d. Gateway to Downtown  | 5e. Conductiveness to Business | 5f. Walkable Community   | 5g. Certainty                 | 6a. Greenhouse Gases | 6b. Other Tailpipe Emissions | 6c. Heat Island | 6d. Water Harvesting | 6e. Walkability / Bikeability | 6f. Land Use Mix  | 6g. Affordability | 7a/7b Change in Economic Potential | 7c/7d. Change in Business Revenue | 7e/7f Change in Sales Tax Revenue | 7g/7h Change in Property Tax Revenue | 7i. Business Impact | 7j. Job Impact | 8a. Construction Cost | 8b. Acquisition Cost | 8c. Income for Reuse of City-Owned Parcels |  |
| Existing Conditions   | —<br>now<br>---<br>future       |  |  |                        |                     |                   |   | +++                    | ○<br>to<br>---<br>future |                               | —<br>to<br>---<br>future |                                | —<br>to<br>---<br>future | —<br>now<br>---<br>future     |                      |                              | ○               | ---<br>---           | —                             |                   |                   |                                    |                                   |                                   |                                      |                     |                |                       | \$                   | \$   |  |
| Option 4A (67' r.o.w.)<br>       | ---                             |  |  |                        |                     |                   |   | +++                    | ○<br>to<br>---<br>future |                               | —<br>to<br>---<br>future |                                | —<br>to<br>---<br>future | ---                           |                      |                              | ○               | ---<br>---           | ○<br>to<br>---                |                   |                   |                                    |                                   |                                   |                                      |                     |                |                       | \$\$                 | \$   |  |
| Option 4B (100' r.o.w.)<br>      | ---                             |  |  |                        |                     |                   |   | ++                     | —                        |                               | ---<br>---               |                                | ○                        | —                             |                      |                              | +               | ---<br>---           | ○                             |                   |                   |                                    |                                   |                                   |                                      |                     |                |                       | \$\$                 | \$\$                                       |  |
| Option 4C (112' r.o.w.)<br>     | ---                             |  |  |                        |                     |                   |   | +                      | ○                        |                               | —                        |                                | +                        | —                             |                      |                              | ++              | ++                   | +                             |                   |                   |                                    |                                   |                                   |                                      |                     |                |                       | \$\$                 | \$\$\$                                     |  |
| Option 4+T A (118' r.o.w.)<br> | ---                             |  |  |                        |                     |                   |   | ○                      | ○                        |                               | ○                        |                                | +                        | ○                             |                      |                              | +               | —                    | +                             |                   |                   |                                    |                                   |                                   |                                      |                     |                |                       | \$\$\$               | \$\$\$                                     |  |
| Option 4+T B (152' r.o.w.)<br> | ---                             |  |  |                        |                     |                   |   | ---                    | +                        |                               | +                        |                                | ○                        | ○                             |                      |                              | ++              | ++                   | +                             |                   |                   |                                    |                                   |                                   |                                      |                     |                |                       | \$\$\$\$             | \$\$\$\$                                   |  |
| Option 6A (114' r.o.w.)<br>    | ○                               |  |  |                        |                     |                   |   | ○                      | +                        |                               | +                        |                                | ○                        | ○                             |                      |                              | +               | ○                    | ○                             |                   |                   |                                    |                                   |                                   |                                      |                     |                |                       | \$\$\$               | \$\$\$                                     |  |
| Option 6B (152' r.o.w.)<br>    | ○                               |  |  |                        |                     |                   |   | ---                    | ++                       |                               | +                        |                                | ○                        | +                             |                      |                              | ++              | ++                   | ○                             |                   |                   |                                    |                                   |                                   |                                      |                     |                |                       | \$\$\$               | \$\$\$\$                                   |  |
| Option 6+T A (146' r.o.w.)<br> | +                               |  |  |                        |                     |                   |   | ---                    | ○                        |                               | +                        |                                | —                        | ++                            |                      |                              | ○               | ○                    | ○                             |                   |                   |                                    |                                   |                                   |                                      |                     |                |                       | \$\$\$\$             | \$\$\$\$                                   |  |
| Option 6+T B (174' r.o.w.)<br> | ++                              |  |  |                        |                     |                   |   | ---                    | ○                        |                               | ++                       |                                | ○                        | +++                           |                      |                              | +               | +                    | ○                             |                   |                   |                                    |                                   |                                   |                                      |                     |                |                       | \$\$\$\$\$           | \$\$\$\$\$                                 |  |

LEGEND Best Performance +++ Neutral o Worst Performance --- Highest Cost \$\$\$\$\$ Lowest Cost \$ Note shaded cells cannot be assessed at current level of design

MAY 30, 2013 DRAFT

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# BROADWAY: EUCLID TO COUNTRY CLUB

## INITIAL DRAFT PERFORMANCE MEASURE ASSESSMENT OF STREET CROSS SECTION CONCEPTS

### NOTES REGARDING CRRENT ASSESSMENT METHODOLOGY

For all new design options, assumption is a 30 mph design speed and posted speed.

**1a. Functionality of Streetside for Pedestrian Activity:** ITE Manual Guidance for Boulevard Street type (25-35 mph with 4-6 lanes, for various context types, see document for definitions)

- C-4 with predominantly commercial ground floor – 1.5 ft. edge, 7 ft. furnishings (including landscape), 8 ft. throughway, 2.5 ft. frontage
- C-4 with predominantly residential ground floor – 1.5 ft. edge, 8 ft. furnishings (including landscape), 8 ft. throughway, 0 to 1.5 ft. frontage
- C-3 with predominantly commercial ground floor – 1.5 ft. edge, 7 ft. furnishings (including landscape), 6 ft. throughway, 1.5 ft. frontage
- C-3 with predominantly residential ground floor – 1.5 ft. edge, 8 ft. furnishings (including landscape), 6 ft. throughway, 0 to 1.5 ft. frontage
- Result of guidance in relations to Broadway – 9.5 ft. landscape with 8 ft. sidewalk, assume that additional sidewalk width if needed would be part of private development

**1e. Pedestrian Crossings:** Assume that number of crossings is equal (except that existing conditions would have fewer than any future option); therefore current assessment is about the quality and distance of the crossing

**1f. Vehicle / Pedestrian Conflicts at Driveways:** Rated Option 4A as negative because the sidewalk would be sloped or go down to street grade at the drive access points because of the narrowness of the sidewalk, landscape width and sidewalk width determines ranking of other concepts – more width provides more ability for vehicles to slow and see pedestrians.

### 2a. Separation of Bikes and Arterial Traffic

- 5 ft. width negative (–)
- 6 ft. width neutral (ITE Manual recommendation)
- 7 ft. width positive (+)

### 2b. Bike Conflicts with Crossing Vehicles

- Assume all options are neutral for vehicles crossing bike lane to get to curb cuts or dedicated right turn lanes
- Options that require buses to cross over to bus pull outs are neutral.
- Options with dedicated transit lanes in the middle get a single + for that, still would have local buses pulling into bus pull outs.

**2e. Bike Facility Improvements:** Assume some basic improvements at crossings and more crossings for all concept options, so this gives

- four lane options 2 pluses
- six lane options 1 plus (regardless of median width as street crossings will likely be at least 18 ft. wide given turn lane and 7 ft. refuge island width.
- Eight lane options are neutral, except for 6+T B given its large width.

### 3b. Transit Stop Facilities

Existing facilities are generally poor, although there are a few bus pull outs

- Four lanes get + when have pull outs (except those with wider pedestrian areas get ++) because of lower construction cost may be more budget to improve transit stops
- Six lanes get neutral with pull outs as this is now the regional standard
- BRT in middle of roadway gets ++ because it is assumed that this investment in roadway infrastructure for BRT would mean commitment to high-level of improvements on the platforms

**3c. Corridor Travel Time:** Existing corridor travel time is considered the base

- Dedicated transit lanes with accompanying signal prioritization, etc. are assumed to be ++ with 6+T B getting +++ because of the overall higher capacity for the option (not sure this is the correct assumption to make), except for outside lane dedicated because it would have issues with right turning vehicles so + rather than ++
- Four lanes with pull outs, signal prioritization, etc. are assumed to experience some slowing because of travel in mixed flow lanes so are –
- Six lanes with pull outs, signal prioritization, etc. are assumed to be neutral; this is based on assumption that traffic in general would flow a bit better than in four lane options.

**3d. Schedule Adherence:** Rough combining of 3b and 3c with a bit more weight to 3c.

### 3f. Accommodation of Future High Capacity Transit

- Existing and 4 lanes get – ,because they would end up having one lane in each direction for vehicular traffic if dedicated transit lanes were provided
- 4+T and six lane options get ++ because six lane would become 4+T with dedication of lanes
- 6+T A has right turning vehicle issues so ++
- 6+T B gets +++, because it provides for high-quality high capacity transit with implementation of the concept

### 4a. Movement of Through Traffic

- Existing section with future traffic considered to be worst condition
- 4 lane options including those with dedicated transit assumed to be - - , dedicated transit lanes assumed to not remove enough conflict with through vehicular traffic to rate a single minus
- 6 lane options assumed to be neutral
- 6+T A assumed to be +, still has right turning vehicle and bus conflicts
- 6+T B assumed to be ++, right turning vehicle and bus conflicts only with local buses

**5a. Historic Resources:** Based on review of relationship to future ROW to existing ROW and distance between building facades.

**5d. Gateway to Downtown:** Roughly combination of transit and vehicular access and mobility with community character

**5f. Walkable Community:** Roughly a combination of pedestrian access and mobility and 5a which is impact on properties

**5g. Certainty:** Roughly a combination of 1a, 1c, 2e, 3f, and 4a.

**6c. Heat Island:** Assume existing condition is the base “neutral” condition. Slight penalty for more R.O.W. paving with assumption that much of existing area outside of R.O.W. is hardscaped and that new paving could be high albedo

**6d. Water Harvesting:** Ratio of landscaped to pavement width.

**6e. Walkability / Bikeability:** Roughly combination of Bicycle Access and Mobility with 5f Walkable Community.

**8a. Construction Cost:** extent of improvements and investment in transit facilities for dedicated transit lane options.

**8b. Acquisition Cost:** Width of future r.o.w. and relationship to segment by segment potential for possible acquisition.